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ABSTRACT

The effectiveness of the reinforcing of low rates of responding (DRL) in the reduction of unacceptable behaviors was demonstrated with two students in regular first and second grade classes. Ss were given play-time reinforcement when the total number of disruptions (such as fighting with other students) during a session were below the DRL limit. After 24 days, the first S's morning session disruptions dropped from a mean of 5.3 to 2.3, and his afternoon disruptions were reduced from a mean of 3 to 1.2. Similar results were achieved with the second S over a 14-day period. Findings supported the effectiveness of DRL procedures as a class management technique. Benefits of the DRL procedures included ease of administration by teachers and avoidance of aversive methods of classroom control. (LS)

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The Use of a DRL Schedule of Reinforcement to Reduce Student Misbehavior in Two Elementary Classrooms

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ABSTRACT

This paper describes two case studies in which reinforcing low rates of responding reduced the number of inappropriate behaviors. In case study number one, the number of times a student disrupted the classroom was reduced when reinforcement was delivered for a classroom disruption rate of less than three per morning session and three per afternoon session. In case study number two, the number of times a teacher had to remind a student to stop breaking a classroom rule was reduced when reinforcement was delivered using the DRL procedure.

Introduction

The use of punishment in the elementary classroom has been one method of reducing inappropriate classroom behaviors. Sajwak, Culver, Hall, and Lehr used the loss of tokens as a punishment technique in controlling classroom disruptions (1972). Punishment in the management of classrooms is becoming unacceptable for various social (O'Leary and O'Leary, 1972) and legal reasons.

Other techniques have been employed as alternatives that do not utilize aversive stimuli as a classroom management technique. These include timeout from reinforcement (McReynolds, 1969; Wasik, Senn, Welch, and Cooper, 1969), extinction (Madsen, Becker, and Thomas, 1968), and reinforcement of behaviors which are incompatible with the appropriate behavior (Thomas, Becker, and Armstrong, 1968). Combinations of the above techniques have been used successfully in the modification of disruptive classroom behavior (Bostow and Bailey, 1963; and Hall, Fox, Willard, Goldsmith, Emerson, Owen, Davis, and Porcia, 1971).

One other procedure that can be used in classroom management, using positive reinforcement to reduce classroom misbehavior, is the reinforcing of low rates of responding (DRL). The DRL procedure is one in which the reinforcement is delivered if the number of responses is less than, or equal to, a prescribed limit. This procedure has proven to be effective in reducing student rates of inappropriate responses in the high school classroom as well as the special classroom (Dietz and Repp, 1973).

The purpose of the present study was to demonstrate the effectiveness of DRL schedules as a classroom management technique in reducing student misbehavior in the regular elementary classroom.

CASE STUDY I

Subject

June was an eight year old girl in the second grade at Hartland Elementary School in Hartland, Vermont. The student was referred because she disrupted other children in her classroom.

Procedures

This study was conducted in the classroom using the teacher as the observer. Observations were made during the morning (AM) and afternoon (PM) sessions by keeping a tally of the number of times June disrupted the classroom. Separate tallies were kept for the AM and PM sessions. A classroom disruption was defined as: 1) talking out without the teacher's permission; 2) fighting with other children; 3) getting out-of-seat without the teacher's permission; and 4) taking other children's possessions without their permission. Data was plotted on a graph which used the multiple baseline design.

Reliability observations were made by having a second trained observer record the same responses as the teacher. The percent of agreement on observations was calculated by dividing the larger

number of observations of disruptions per session into the smaller.

Baseline

During the baseline condition for the AM and PM sessions the teacher recorded data on the number of times June disrupted the classroom. Baseline ended after six days in the AM session and after 11 days in the PM session.

Experimental Condition

For the 13 days of the AM experimental condition June was told the "types" of classroom disruptions she engaged in. The student was also told that, if at the end of the morning session, the teacher had only recorded three or less disruptions, she would be allowed to go to the main office and play a game with the principal or consulting teacher for five minutes before the lunch bell. No mention of the PM session was made. At the end of each session, the student was told whether or not she had met the requirement. The student was never informed of the number of disruptions she had accumulated during the session. The same experimental condition was introduced in the PM after 11 sessions. The afternoon experimental conditions were in effect for 13 days employing the same procedures as the morning sessions.

Post-Check

Data gathering for the AM session was terminated after the 19th day. The teacher requested that data be taken only as a post-check measure (approximately every third day) due to the low rate

of disruptions that had been established. The teacher did, however, continue to take the data during the PM session. Two post-checks were taken on the 22nd and 24th days.

Results

Reliability of data gathered remained at 100% accuracy on all occasions.

Figure 1 illustrates the rate at which June disrupted the classroom during the AM and PM sessions. While in the baseline condition of the AM session (days 1 to 6) the student's rate of disruptions ranged from two to eight with a mean of 5.3.

Days seven to 19 show the results of the AM experimental condition phase. The student averaged 2.3 disruptions (with a range of zero to five) which was below the DRL limit of three. The post-check measures demonstrated that the rate of disruptions remained below the DRL limit.

In the PM baseline phase (days 1 to 11) disruptions ranged from one to six with an average of three. With the introduction of the DRL limit (days 12 to 24) the number of disruptions was reduced to 1.2 with a range of zero to six.

CASE STUDY II

Subject

Joe was a first grade boy at the Hartland Elementary School in Hartland, Vermont. He was diagnosed as having muscular dystrophy.

The student was referred because the teacher had to spend a lot of time reminding Joe not to break one of the classroom rules.

Procedures

This study was conducted in the student's classroom. Observations were made by the classroom teacher during the morning (AM) and afternoon (PM) sessions. The teacher kept a tally of the number of times she had to confront Joe for breaking a classroom rule. Classroom rules were defined as: 1) no fighting; 2) no talking out wihtout the teacher's permission; 3) no getting out of your seat without the teacher's permission. Data was then plotted on a graph which used the multiple baseline design.

A second trained observer recorded the same responses as the teacher. These measures were the reliability observations. The percent agreement on observations was calculated in the same manner as Case Study I.

Baseline

During the baseline measures for the AM and PM sessions, the teacher recorded data on the number of times she had to confront Joe for breaking a classroom rule. Baseline ended after four days in the AM session and after six days in the PM session.

Experimental Condition

For the 10 days of the AM experimental condition, Joe was verbally given a list of the classroom rules. The student was

also told that, if at the end of the morning session, the teacher had only recorded four or less confrontations, he would be allowed to play with his blocks for five minutes. Joe was not allowed to play with the blocks at any other time during the day. No mention of the PM session was made. At the end of each session, the student was told whether or not he had met the requirement. The student was never informed of the number of confrontations he had accumulated during the session. The same experimental condition was introduced in the PM after six baseline days. The afternoon experimental conditions were in effect for eight days employing the same experimental conditions as the morning sessions.

Results

Reliability of the data gathered remained at 100% on all occasions.

Figure 2 shows the rate at which Joe was confronted by his teacher for breaking a classroom rule. Both the AM and PM sessions are represented. The number of confrontations during the baseline condition of the AM session (days 1 to 4) ranged from three to 20 with an average of eight confrontations.

Days five to 14 show the results of the AM experimental condition phase. Here, the student averaged 2.2 confrontations.

During the PM baseline phase (days 1 to 6) confrontations ranged from three to six with a mean of 4.5. With the introduction of the DRL limit (days 7 to 14) the number of confrontations was reduced to a mean of 1.9 with a range of zero to seven.

Discussion

The results of the case studies demonstrates the effectiveness of the DRL limit in the reduction of unacceptable classroom behaviors in the regular elementary classrooms. The number of classroom disruptions and confrontations were effectively reduced through the use of the DRL limit. Reductions in both the AM and PM sessions occurred immediately and remained in effect for the entire experimental condition and post-check periods.

As a classroom management technique, the DRL procedures seem to be effective not only in obtaining a reduction in undesirable behaviors but in the ease by which the teacher can administer them with little or no interruption of her classroom procedures. The criteria of avoiding the use of more aversive methods of classroom control has been met by the DRL's use of positive reinforcement.

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FIGURE 1

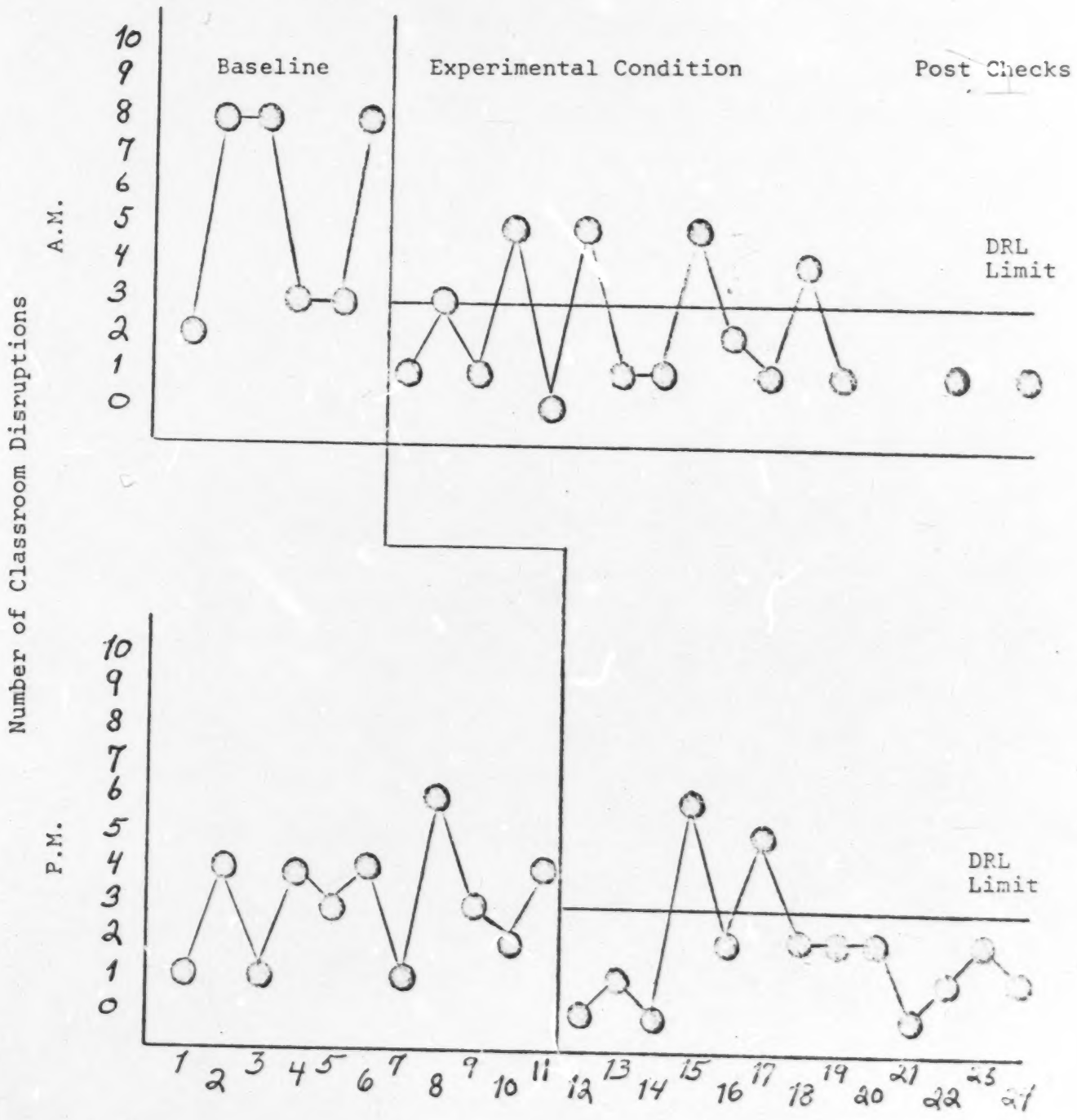

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FIGURE 2